

# Health Information Technology

## *An Assessment of Maryland Dental Practices*

In 2018, the Maryland Health Care Commission (MHCC) collaborated with the Maryland State Dental Association (MSDA), local component societies<sup>1</sup>, and the Maryland State Board of Dental Examiners to conduct an environmental scan of health information technology (health IT) adoption among dentists in Maryland. Data was collected through a questionnaire that inquired about dentists' use and perceived value of electronic health records (EHRs)<sup>2</sup>, health information exchange (HIE)<sup>3</sup>, and teledentistry<sup>4,5</sup>.

A total of 141 respondents, consisting of dentists, practice managers, and practice staff completed the survey. Key findings are presented along with comparison data from a national survey conducted by the American Dental Association (ADA).<sup>6,7</sup>

### Dental EHR Adoption

- Factors such as system usability, training, change management, and project organization contribute to the successful implementation and use of EHRs.<sup>8</sup>
- Challenges associated with EHR adoption for some practices include costs, workflow redesign, privacy and security concerns, and an unclear return on investment.<sup>9</sup>



<sup>1</sup> The American Dental Association (ADA) membership structure includes national, state (constituent) and local (component) levels. The MSDA has component societies throughout the State. More information is available at: [www.msda.com/msda-components.php](http://www.msda.com/msda-components.php).

<sup>2</sup> EHRs provide an electronic version of a paper medical record, and include patient demographics, progress notes, problems, medications, past medical history, and diagnostic information.

<sup>3</sup> HIE is the secure exchange of health information electronically between providers.

<sup>4</sup> Teledentistry (or telehealth) is the use of two-way audio, video, and other forms of telecommunications technology to share medical information.

<sup>5</sup> Some survey questions used a Likert scale. A Likert scale is an ordered scale from which respondents choose one option that best aligns with their view. It is often used to measure respondents' attitudes by asking the extent to which they agree or disagree with a question or statement.

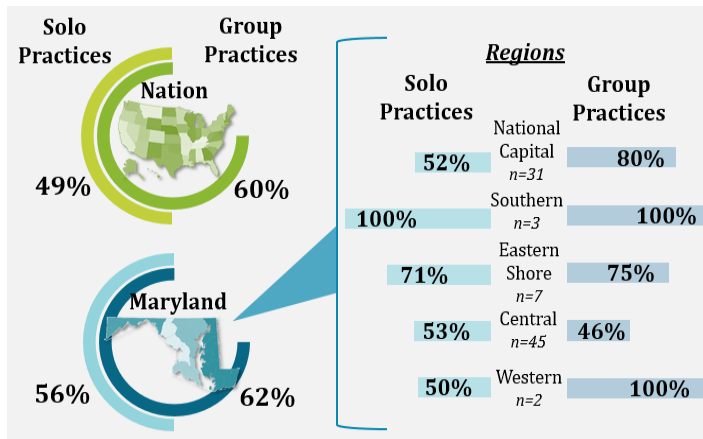
<sup>6</sup> The MHCC collaborated with the ADA in 2018 to develop a health IT survey for national distribution. National survey responses (N=645) were collected in March of 2018.

<sup>7</sup> Data was self-reported and not validated for accuracy.

<sup>8</sup> Sidek YH, Martins JT, International Journal of Medical Informatics, *Perceived critical success factors of electronic health record system implementation in a dental clinic context: An organizational management perspective*, November 2017. Available at: [www.sciencedirect.com/science/article/pii/S1386505617302204](http://www.sciencedirect.com/science/article/pii/S1386505617302204).

<sup>9</sup> Challenges associated with implementing an EHR identified by responding dentists include costs to purchase and maintain the EHR (48 percent), workflow redesign (27 percent), privacy and security concerns (27 percent), and an unclear return on investment (23 percent).

<sup>10</sup> Compound annual growth rate determined by using a beginning value of the number of EHR adopters in 2012 (n=48) and an ending value of number of adopters in 2018 (n=85) over six periods.

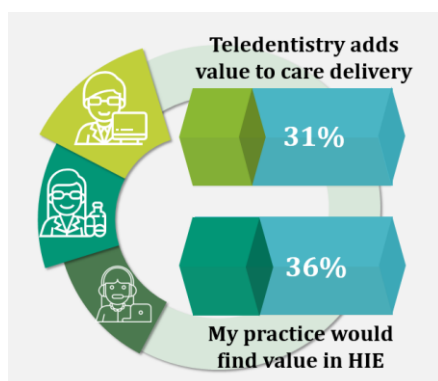
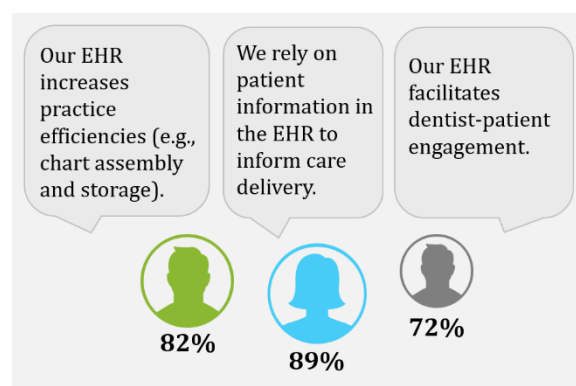


## EHR Adoption by Setting

- Adoption decisions are influenced by practice size, a provider's views on technology, and years of experience.<sup>11</sup> Adoption tends to be higher in large general practices. Unique specialty practice workflows increase uncertainty about the benefits of EHRs.<sup>12</sup>
- Among dentists without an EHR, those who report having plans to adopt the technology within the next 12 months are largely located in the Central and Western regions of the State.<sup>13</sup>

## Perceptions of EHR Value

- Dentists who have adopted an EHR view the technology as beneficial to their practice, consistent with findings from national studies.<sup>14</sup>
- Most dentists who have implemented an EHR would recommend adoption to a colleague.<sup>15</sup>



## Views on Telemedicine and HIE

- Interest in telemedicine stems from opportunities to improve access for underserved communities, and expand a practice's services without needing to expand the practice.<sup>16</sup>
- HIEs provide increased access to patient information for a more complete view of a patient's electronic health record and can enable better care coordination between providers in medical and dental settings.<sup>17</sup>

<sup>11</sup> ADA Technical Report No. 1030, Dental Provider's Guide to Electronic Dental Record, January 2015. Available at: [ebusiness.ada.org/Assets/docs/32619.pdf](http://ebusiness.ada.org/Assets/docs/32619.pdf).

<sup>12</sup> Chauhan Z, Samarah M, Unertl KM, Jones MW, Applied Clinical Informatics, *Adoption of Electronic Dental Records: Examining the Influence of Practice Characteristics on Adoption in One State*, August 2018. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC6094025/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6094025/).

<sup>13</sup> Overall, about 19 percent of solo practices and 22 percent of group practices in the State intend to adopt an EHR in the next 12 months.

<sup>14</sup> Acharya A, Schroeder D, Schwei K, Chyou PH, Clinical Medicine and Research, *Update on Electronic Dental Record and Clinical Computing Adoption Among Dental Practices in the United States*, December 2017. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC5849439/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5849439/).

<sup>15</sup> Eighty-one percent of EHR adopters report that they are either very likely or likely to recommend EHR adoption.

<sup>16</sup> Nichols KR, Journal of the International Society for Telemedicine and Health, *Telemedicine Overview: United States of America*, 2019. Available at: [journals.ukzn.ac.za/index.php/IISfTeH/article/view/924/1349](http://journals.ukzn.ac.za/index.php/IISfTeH/article/view/924/1349).

<sup>17</sup> Kalenderian E, Halamka JD, Spallek H, Applied Clinical Informatics, *An EHR with Teeth*, May 2016. Available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC4941850/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4941850/).